Fact Sheet 10

SOUND GARDENING

Gardening With an Eye on Water Quality

HERBICIDES AND WATER QUALITY

Caution is Required With all Herbicides

Almost all pesticides we use on our lawns and landscapes or in our gardens can be damaging if they are not used exactly as their labels state. Improper application or spills may not only damage desirable plants, but careless use can la harmful to beneficial organisms like birds and bees.

Pollution of ground and surface water can be a possible problem when chemicals are used incorrectly. Water quality is now a malter of national concern. Everyone must play a part to keep our natural waters clean and healthy.

> The ***Sound Gardening*** approach to herbicides is to minimize applications by using only what is needed at the proper time and in correct amounts.

Everyone Lives on a Stream

Herbicides are used to control unwanted plants in yards by applying directly to the target weeds. Because of

their potential to contaminate, they should be used carefully. Everyone gardens over groundwater and lives on a stream, whether there is one flowing through the backyard or not. Water that flows off your property is carried into drainage ditches or storm sewers. The water eventually flows into Long Island Sound or other coastal waters.

Potential to Pollute

Whether a herbicide has the potential to find its way into ground or surface water is dependent on a number of factors: the chemical's solubility (whether it readily dissolves in water): its adsorptive qualities (how tightly it can bind to clay and humus particles in the soil); and its degradation (how fast soil microbes or other factors break it down into harmless components).

Factors to Consider

Other factors that influence a herbicides' behavior and effectiveness are:

- soil texture
- slope or grade of the land where it is used
- the proximity of the groundwater to the soil surface
- the presence and depth of hardpans and other impermeable layers
- amount and timing of rainfall or irrigation following application.

Texture refers to the amount of sand, silt or clay that makes up a soil. Soils that contain a fair amount of clay are less likely to allow rapid movement of chemicals through them. Both clay particles and humus or other organic matter help to bind many herbicides, retaining them in the soil. This minimizes contamination of ground or surface waters. However, erosion or surface runoff may carry panicles of clay, with their tightly-adsorbed herbicides, to Long Island Sound or other surface water bodies. Fortunately, high quality lawns and properly landscaped yards will prevent runoff.

Many chemicals are broken down by soil microbes, while others are decomposed by sunlight in a process called photodecomposition. Those that are degraded quickly will have less of a chance to contaminate water supplies. If herbicides are the only option left to solving a problem in the lawn or garden, be sure to follow the label closely, applying only what is needed. Since each herbicide was developed for a specific weed, proper application rates and timing with regard to weed growth stage and calibration of equipment are all essential to eliminating the problem and preserving water quality. Check with your local Cooperative Extension office for advice on which herbicides to apply for specific problems.

REMEMBER

* Apply herbicides only when absolutely necessary.
* Herbicide choices can impact water quality.
* Good garden and lawn maintenance minimizes the need for herbicides.
* A dense healthy lawn will help prevent runoff.
* Proper application rates and timing will improve the herbicide's effectiveness and protect water quality.
* Avoid overwatering your lawn.

For more information on Sound ***Gardening*** and herbicides, contact your local Cooperative Extension office.

In Connecticut:

Storrs:	(203)486–3435	Middlesex:	(203)345–45 11
Fairfield:	(203)797–4176	Windham:	(203)774–9600
Hartford:	(203)24 1–4940	New Haven:	(203)789–7865
Tolland:	(203)875–333 1	New London:	(203)887–1608
Litchfield:	(203)567–9447		

In New York:

Nassau	(5 16)454–0900
Suffolk	(516)727–7850
Westchester	(914)682–3072

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